



-- PATENT APPLICATION --
-- Attorney Docket No. 25835.11 --

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: M.L. Collins et al.)
Serial No.: 08/238,080)
Filing Date: May 3, 1994)
Title: TARGET AND BACKGROUND CAPTURE)
METHODS WITH AMPLIFICATION FOR)
AFFINITY ASSAYS)
Art Unit: 1807)
Examiner: Dianne Rees, Ph.D.)

#21

TERMINAL DISCLAIMER

The Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Petitioner, AMOCO CORPORATION, a corporation of the State of Indiana with post office address P.O. Box 87703, Chicago, Illinois 60680-0703, certifies that it is the assignee of the entire right, title and interest in U.S. Patent Application Serial No. 08/238,080 filed May 3, 1994 for Target And Background Capture Methods With Amplification For Affinity Assays and that said Assignment is recorded for its predecessor application U.S. Serial No. 07/136,920 at Reel 4834, Frame 0373. Petitioner AMOCO CORPORATION hereby disclaims the terminal part of any patent granted on Application Serial No. 08/238,080 which would extend beyond the date of the end of the full statutory term available to any patent issuing from co-pending U.S. Serial No. 08/236,877 for Target And Background Capture Methods And Apparatus For Affinity Assays.

Petitioner does not disclaim any terminal part of any patent granted on Application Serial No. 08/238,080 prior to the expiration date of the full statutory term of any patent issuing from

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co-pending U.S. Serial No. 08/236,877 in the event that such patent later expires for failure to pay a maintenance fee, is held unenforceable or found invalid, is statutorily disclaimed in whole or terminally disclaimed under 37 C.F.R. §1.321(a), has all claims cancelled by a re-examination certificate, or is otherwise terminated prior to the expiration of its full statutory term.

AMOCO CORPORATION hereby agrees that any patent granted on Application Serial No. 08/238,080 shall be enforceable only for and during such time period that the legal title to such patent and any patent issuing from U.S. Serial No. 08/236,877 shall be the same, this agreement to run with any patent granted on the above-identified patent application and to be binding upon the grantee, its successors or assigns.

The undersigned certifies that all of the documents in the chain of title of Application Serial No. 08/238,080 and U.S. Serial No. 08/236,877 have been reviewed and, to the best of the undersigned's knowledge and belief, title to both is in AMOCO CORPORATION.

The undersigned certifies that the authority to sign this TERMINAL DISCLAIMER has been delegated to him by AMOCO CORPORATION.

Date: July 10, 1997
AMOCO CORPORATION
Law Department
200 East Randolph Drive
Chicago, Illinois 60601
Phone: (312) 856-2052
Facsimile: (312) 856-4972

Respectfully submitted,

By: Frank J. Sroka
Frank J. Sroka
General Attorney
Amoco Corporation
Registration No. 27,597

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SEP 10 1997

-- PATENT APPLICATION --
Attorney Docket No. 25,835.11 --
GROUP 1000

LP 180

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: M. L. Collins, et al.
Serial No.: 08/238,080
Filing Date: May 3, 1994
Title: TARGET AND BACKGROUND CAPTURE
METHODS WITH AMPLIFICATION FOR
AFFINITY ASSAYS
Art Unit: 1807
Examiner: Dianne Rees, Ph.D.

CERTIFICATE OF MAILING & FACSIMILE RESPONSE

I hereby certify that this correspondence is being sent via facsimile to: Dianne Rees, at facsimile number (703) 305-7401, and is being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to: The Commissioner of Patents and Trademarks, Washington, D.C. 20231, on the date shown below.

LESLIE B. HENSON

(Printed Name)

Leslie B. Henson

(Signature)

August 15, 1997

(Date of Deposit)

RETRANSMITTAL AFTER FINAL OF
TERMINAL DISCLAIMER AND EXECUTED
DECLARATION OF DAVID H. PERSING, M.D., PH.D.

The Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

During an interview dated July 10, 1997, Applicants were informed that the pending claims would be allowed pending receipt of an executed Declaration of Dr. Persing and a terminal disclaimer. Thereafter, Applicants submitted the executed Declaration and terminal disclaimer by facsimile on July 11, 1997. (The facsimile was sent to the Assistant Commissioner of Patents at (703) 305-3014. Applicants' facsimile machine indicated that the intended transmission was successful. Applicants have retained a copy of the confirmation report from the facsimile machine. A copy of the confirmation report is included with this paper.)

09/25/1997 CSTRENT 00000029 DAN:220590 08238080
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Applicants' representative contacted the Examiner on August 15, 1997 to inquire as to the status of the application and was informed that the Declaration had not yet been received. Applicants' representative and the Examiner agreed that Applicant would retransmit the papers to the Examiner directly. Accordingly, Applicants transmit herewith copies of the executed Declaration of Dr. Persing and the executed terminal disclaimer.

Applicants note further that their previous submission did not include the fee required under 37 CFR 1.20(d) for filing the terminal disclaimer and did not provide authorization to access a deposit account to satisfy the fee requirement. Accordingly, Applicants herewith authorizes the Assistant Commissioner to charge this fee and any additional fees which may be required for this application under 37 CFR §1.20, or credit any overpayment, to Deposit Account No. 22-0590. An extra copy of this paper is enclosed for the convenience of the Finance Branch.

Applicants wish to express their appreciation to the Examiner for the consideration extended to Applicants' representative and the Examiner's helpfulness in advancing the application.

Finally, Applicants submit that all claims are in condition for allowance, which action is earnestly solicited.

Respectfully submitted,
AMOCO CORPORATION

By: Norval B. Galloway
Norval B. Galloway
Attorney for Applicant
Registration No. 33,595

Date: 8/15/97
AMOCO CORPORATION
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3100 Woodcreek Drive
Downers Grove, Illinois 60515-5400
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EXHIBIT 1:

CURRICULUM VITAE

DAVID H. PERSING, M.D., PH.D.

CURRICULUM VITAE
DAVID H. PERSING, M.D., PH.D.

David Harold Persing, M.D., Ph.D.

Date of Birth: June 13, 1955, San Jose, California

Address: 2225 48th Street, S.W., Rochester, MN 55902

Telephone: (507) 284-2876 (Work)
(507) 280-7696 (Home)
E-mail: persing@mayo.edu

Marital Status: Married

Education:

September 1974 - June 1979
California State University, San Jose, California
B.A. in Biochemistry awarded June 1979

October 1980 - May 1988
School of Medicine, University of California, San Francisco

October 1981 - May 1988
Medical Scientist Training Program,
University of California, San Francisco

September 1982 - March 1987
Graduate Program in Biochemistry and Biophysics,
Division of Genetics, University of California,
San Francisco

March 1988
Ph.D. granted, Department of Biochemistry and
Biophysics, University of California, San Francisco

May 1988
M.D. granted, School of Medicine, University of California, San Francisco

July 1988 - June 1990
Resident and Fellow, Department of Laboratory Medicine, Yale School of Medicine

July 1989 - September 1990
Research Fellow, Department of Cell Biology, Yale School of Medicine

referred to as "David"

Honors:

Graduation with highest honors,
California State University, San Jose, California, 1979

Departmental Honors in Chemistry, 1979

Finalist, Dean's Prize for Research, School of Medicine, 1981

Graduate Dean's prize for Student Research,
University of California, San Francisco, 1984

Gip A. Hudson Award for the study of liver diseases,
National Student Research Forum, Galveston, Texas, 1985

James McLaughlin Award for the study of infectious diseases,
National Student Research Forum, Galveston, Texas, 1985

University Patent Funds Award, 1986

Young Investigator Award,
Academy of Clinical Laboratory Physicians and Scientists, 1989

Mayo Foundation Scholar, 1990

U. S. Patent Application: "Sensitive and Specific Detection of B. burgdorferi by Nucleic Acid Amplification," 1994

U. S. Patent Application: "Specific Detection of Rifampin Resistant Mycobacterium tuberculosis by Nucleic Acid Amplification," 1994

U.S. Patent Application: "Method for Detecting Borrelia burgdorferi Infection," 1996

College of American Pathologists, Microbiology Resource Committee, 1993-present

ASM Foundation Lectureship, 1995-1997

Associate Editor: Journal of Clinical Microbiology, 1996-

Associate Editor: Molecular Diagnosis, 1996-

1997 Justus Strom Award, Swedish Medical Society

Dubious Honors:

Consultant to Criminal Attorney Barry Scheck and invited expert witness, O.J. Simpson criminal trial

Editorial Boards:

Journal of Clinical Microbiology (1990-1996)
Diagnostic Microbiology and Infectious Diseases (1994-96)
New England Journal of Medicine (Regular Reviewer)
Gastroenterology (Regular Reviewer)
Journal of Infectious Diseases (Guest Reviewer)

Scientific Advisory Boards:

Vysis, Inc., Naperville, IL (1995-present)
Corixa, Inc., Seattle, WA (1995-present)
BioMerieux, Marcy L'Etoile, France (1996-present)

Licensure and Certification:

Status: Medicine and Surgery License #35080, State of Minnesota
Board Certified Forensic Examiner
Board Eligible, Clinical Pathology

Appointments:

Summer Research Fellowship, University of California,
San Francisco, School of Medicine, 1980

September 1981 to May 1988:
Medical Scientist Training Program, University of California, San Francisco

July 1988 to June 1990:
Resident, Department of Laboratory Medicine, Yale University School of Medicine

July 1990 to September 1990:
Mayo Foundation Scholar, Department of Cell Biology, Yale University School of Medicine

September 1990 to June 1994:
Senior Associate Consultant, Divisions of Clinical Microbiology, Experimental Pathology and
Infectious Diseases, Mayo Clinic/Foundation

June 1994 to present:
Consultant, Divisions of Clinical Microbiology, Experimental Pathology and Infectious Diseases,
Mayo Clinic/Foundation

January 1991 to June 1995:
Assistant Professor, Department of Laboratory Medicine and Pathology, Mayo Medical School

July 1995 to present:
Associate Professor of Microbiology, Mayo Medical School, Mayo Clinic/Foundation

July 1995 to present:
Associate Professor, Department of Laboratory Medicine and Pathology, Mayo Medical School

September 1991 to present:
Adjunct Assistant Professor, Department of Biology/
Microbiology, University of Wisconsin-La Crosse

1996 to present:
M.D.- Ph.D. Program Council, Mayo Medical School

Societies:

American Association for the Advancement of Science
California Medical Association
American Society for Microbiology
Minnesota Medical Association
American Medical Association
American Society for Tropical Medicine and Hygiene
American College of Rheumatology

Teaching Experience:

Teaching Assistant, Chemistry for Engineers, San Jose State University,
September 1979 to June 1980

Graduate Teaching Assistant, Introductory Biochemistry
UC San Francisco, September 1982 to April 1983

Instructor, Biochemistry National Boards Review Course,
School of Dentistry, UC San Francisco, 1983-1986

Biochemistry Advisor, Health Science Special Services
Summer Program, 1984-1986

Laboratory Instructor, Medical Microbiology Course, Yale School of
Medicine, 1988-1989

Lecturer, Medical Microbiology Course, Yale School of Medicine, 1989

Medical Microbiology Course, Mayo Medical School, 1991-present

Volunteer Services:

Department of Public Health, Huehuetenango, Guatemala,
1977-1978

National Ski Patrol, Alpine Meadows and Homewood, CA, 1978-1981

Dorothy Day House, Rochester, MN, 1992-present

Extracurricular Activities:

Skiing, vintage automobile restoration, brass ensemble (trombone)

Research Experience and Supervisors:

Spring 1979 - Summer 1980

Dr. Robert Fowler, Department of Biology, San Jose State University. Mutational specificity of the base analogue, 2-aminopurine in *Escherichia coli*.

Summer 1980 - Spring 1981

Dr. Phillip Coffino, Department of Microbiology, UC San Francisco. Mechanism of 2-aminopurine mutagenesis in mouse T-lymphosarcoma cells.

Summer 1981 - Fall 1981

Dr. Harold E. Varmus, Department of Microbiology, UC San Francisco. Molecular analysis of mutant src alleles.

Summer 1982 - Winter 1983

Dr. Patrick O'Farrell, Department of Biochemistry, UC San Francisco. Isolation and characterization of DNA clones representing the engrailed locus of *Drosophila melanogaster*.

Spring 1983 to 1988

Drs. Donald Ganem and Harold Varmus (1989 Nobel Laureate) (thesis co-advisors) Identification and characterization of the presurface proteins of hepatitis B virus.

July 1989 to September 1990

Dr. Ari Helenius, Department of Cell Biology, Yale School of Medicine.
Papovaviruses: Assembly, Disassembly, and Cellular Interactions.

Current Research Interests:

Laboratory-based, extramurally funded programs.

- 1) Immunological interactions of tick-borne infections
- 2) Determinants of microbial persistence and tissue tropism
- 3) Effects of T cell differentiation on disease expression
- 4) Identification of novel T cell adjuvants from microbial sources

Clinical research

- 1) Association of viral heterogeneity and host immunogenetic determinants in viral disease expression
- 2) Pathogen discovery by broad-range amplification techniques
- 3) Association of infections with cancer and chronic human diseases

Extramural Support:

NIH - Allergy and Infectious Diseases: 1-PO1-AI30548-01-A1 (9/1/91 - 8/31/96)

Lyme Disease: Pathogenesis and Protection (Yale Program Project Grant),

P.I.: S. W. Barthold, D.V.M., Ph.D. Co-investigator: David H. Persing, M.D., Ph.D.;
\$295,407 award amount, direct costs

NIH - Allergy and Infectious Diseases: 1-R01-AI32403-01 (9/30/91 - 8/31/97)

Mechanisms of Biological Variation in Lyme Disease,

P.I.: D. H. Persing, M.D., Ph.D.; \$1,006,775 award amount, direct costs, Status: renewal pending



EXHIBIT 2:
PUBLICATIONS
DAVID H. PERSING, M.D., PH.D.

PUBLICATIONS

DAVID H. PERSING, M.D., PH.D.

Books:

Persing, D.H., T.F. Smith, T.J. White, and F. Tenover (eds). (1993) *Diagnostic Molecular Microbiology: Principles and Applications*, ASM Press, Washington, DC

Persing, D.H. (1996) *PCR Protocols for Emerging Infectious Diseases*, ASM Press, Washington, DC

Book Chapters & Reviews:

Persing, D.H., H.E. Varmus, and D. Ganem. (1985) Antibodies to preS and X determinants arise during natural infection with ground squirrel hepatitis virus. In *The Molecular Biology of Hepatitis Viruses*, Cold Spring Harbor Press.

Persing, D.H., H.E. Varmus, and D. Ganem. (1986) Inhibition of secretion of hepatitis B surface antigen by a related presurface polypeptide. In *The Molecular Biology of Hepatitis Viruses*, Cold Spring Harbor Press.

White, T.J., R. Madej, and D.H. Persing. (1992) The polymerase chain reaction: clinical applications. In *Advances in Clinical Chemistry*, Academic Press, San Diego, CA, pp. 161-196.

Persing, D.H. (1992) Nucleic acid amplification techniques in the diagnosis of infectious diseases. In *Clinical Laboratory Medicine*, R. C. Tilton, ed., Mosby Year Book, pp. 572-581.

Campbell, S., P. Fiedler, and D.H. Persing. (1992) Nucleic acid amplification techniques in clinical diagnostics. In *Manual of Clinical Laboratory Immunology*, American Society for Microbiology, Washington, DC.

Persing, D.H., S.W. Barthold, and S.E. Malawista. (1992) Molecular detection of *Borrelia burgdorferi*. In *Lyme Disease: Molecular and Immunologic Approaches*, Cold Spring Harbor Laboratory Press, pp. 299-315.

Barthold, S.W., M. de Souza, E. Fikrig, and D.H. Persing. (1992) Lyme borreliosis in the laboratory mouse. In *Lyme Disease: Molecular and Immunologic Approaches*, Cold Spring Harbor Laboratory Press, pp. 223-242.

Podzorski, R.P., and D.H. Persing. (1995) Molecular detection and identification of microorganisms. In *Manual of Clinical Microbiology*, 6th edition, Murray PR, Baron EJ, Pfaller MA, Tenover FC, Tenover FC (eds.), pp. 130-157, ASM Press, Washington, DC.

Relman, D.A., and D.H. Persing. (1996) Genotypic methods for microbial identification. In *PCR Protocols for Emerging Infectious Diseases*, ASM Press, Washington, DC, pp. 3-31.

Persing, D.H., D.A. Relman, and F.C. Tenover. (1996) Genotypic detection of antimicrobial resistance. In PCR Protocols for Emerging Infectious Diseases, ASM Press, Washington, DC, pp. 33-57.

Hofmeister, E.K., D.H. Persing, L. Mann, and G.L. Woods. (1996) Spirochete infections. In Clinical Diagnosis and Management by Laboratory Methods. Henry, J.B. (Ed.), 19th edition, W.B. Saunders, Philadelphia, PA.

Whelan, A.C., and Persing, D.H. (1996) The role of nucleic acid amplification and detection in the clinical laboratory. *Ann. Rev. Microbiol.* 50:349-73.

Persing, D.H. (1997) Babesiosis. In Pathology of Infectious Diseases, Volume I & II. Connor, D.H., F.W. Chandler, H.J. Manz, D.A. Schwartz, and E.E. Lack (Eds.), Appleton & Lange, Stamford, CT.

Zheng, X., and D.H. Persing. Genetic amplification techniques for the diagnosis of infectious disease. In Rapid Methods. Specter, S. (Ed.)

Original Articles:

Persing, D.H., L. McGinty, C.W. Adams, and R.G. Fowler. (1981) Mutational specificity of the base analogue, 2-aminopurine, in *E. coli*. *Mutation Research* 83:25-37.

Caras, I.W., M.A. MacInnes, D.H. Persing, P. Coffino, and D.W. Martin. (1982) Mechanism of 2-aminopurine mutagenesis in mouse T-lymphosarcoma cells. *Mol. Cell. Biol.* 2:1096-1103.

Persing, D.H., H.E. Varmus, and D. Ganem. (1985) A frameshift mutation in the pre-S region of the human hepatitis B virus genome allows production of surface antigen particles but eliminates binding to polymerized albumin. *Proc. Natl. Acad. Sci. USA* 82:3440-3444.

Persing, D.H., H.E. Varmus, and D. Ganem. (1986) Antibodies to preS and X determinants arise during natural infection with ground squirrel hepatitis virus. *J. Virol.* 60: 177-184.

Persing, D.H., H.E. Varmus, and D. Ganem. (1986) Inhibition of secretion of hepatitis B surface antigen by a related presurface polypeptide. *Science* 234:1388-1391.

Persing, D.H., H.E. Varmus, and D. Ganem. (1987) The preS1 protein of hepatitis B virus is acylated at its N-terminus with myristic acid. *J. Virol.* 61:1672-1677.

Persing, D.H., and M.L. Landry. (1989) In vitro Amplification Techniques for the detection of Nucleic acids: New Tools for the Diagnostic Laboratory. *Yale J. Biol. Med.* 62:159-171.

Persing, D.H., S.R. Telford, A. Spielman, and S.W. Barthold. (1989) Detection of *Borrelia burgdorferi* infection in *Ixodes dammini* ticks using the polymerase chain reaction. *J. Clin. Micro.* 28:566-572.

Persing, D.H., S.R. Telford III, P.N. Rys, D.E. Dodge, T.J. White, S.E. Malawista, and A. Spielman. (1990) Detection of *Borrelia burgdorferi* DNA in museum specimens of *Ixodes dammini* ticks. *Science* 249:1420-1423.

Persing, D.H., S.R. Telford III, A. Spielman, and S.W. Barthold. (1990) Detection of *Borrelia burgdorferi* infection in *Ixodes dammini* ticks with the polymerase chain reaction. *J. Clin. Microbiol.* 28:566-572.

Barthold, S.W., D.H. Persing, A. Armstrong, and R.A. Peeples. (1991) Kinetics of *Borrelia burgdorferi* dissemination following intradermal inoculation of mice. *Am. J. Path.* 139:263-273.

Persing, D. H. (1991) Polymerase chain reaction: Trenches to benches. *J. Clin. Micro.* 29:1281-1285.

Malawista, S.E., R.T. Schoen, T.L. Moore, D.E. Dodge, T.J. White, and D.H. Persing. (1992) Failure of multitarget detection of *B. burgdorferi*-associated DNA sequences in synovial fluids of patients with juvenile rheumatoid arthritis: a cautionary note. *Arthr. & Rheum.* 35:246-247.

Persing, D.H., D. Mathiesen, W.F. Marshall, S.R. Telford III, A. Spielman, J.W. Thomford, and P.A. Conrad. (1992) Detection of *Babesia microti* by polymerase chain reaction. *J. Clin. Microbiol.* 30:2097-2103.

Armstrong, A.L., S.W. Barthold, D.H. Persing, and D.S. Beck. (1992) Carditis in Lyme disease susceptible and resistant strains of laboratory mice infected with *Borrelia burgdorferi*. *Am. J. Trop. Med. Hyg.* 47(2):249-258.

Conrad, P.A., J. Thomford, A. Marsh, S.R. Telford III, J. Anderson, A. Spielman, E. A. Sabin, I. Yamane, and D.H. Persing. (1992) Ribosomal DNA probe for differentiation of *Babesia microti* and *B. gibsoni* isolates. *J. Clin. Microbiol.* 30:1210-1215.

Gustaferro, C.A., and D.H. Persing. (1992) Chemi-luminescent universal probe for bacterial ribotyping. *J. Clin. Microbiol.* 30:1039-1041.

Fikrig, E., S.W. Barthold, D.H. Persing, X. Sen, F.S. Kantor, and R.A. Flavell. (1992) *Borrelia burgdorferi* strain 25015: characterization of *OspA* and vaccination against infection. *J. Immunol.* 148:2256-2260.

Persing, D.H., and J. Rakela. (1992) Polymerase chain reaction for detection of hepatitis viruses: Panacea or purgatory? *Gastroenterology* 103:1098-1099.

Shapiro, E.D., M.A. Gerber, N.B. Holabird, A.T. Berg, H.M. Feder, Jr., G.L. Bell, P.N. Rys, and D.H. Persing. (1992) A controlled trial of antimicrobial prophylaxis for Lyme disease after deer-tick bites. *N. Engl. J. Med.* 327:1769-1773.

Persing, D.H. (1992) Diagnostic molecular microbiology: current challenges and future directions. *Diagn. Microbiol. Infect. Dis.* 16:159-163.

Meier, A., D.H. Persing, M. Finken, and E.C. Böttger. (1993) Elimination of contaminating DNA within PCR reagents-implications for a general approach to detect uncultured pathogens. *J. Clin. Microbiol.* 31:646-652.

Rys, P.N., and D.H. Persing. (1993) Preventing false positives: quantitative evaluation of three protocols for inactivation of polymerase chain reaction amplification products. *J. Clin. Microbiol.* 31:2356-2360.

Espy, M.J., T.F. Smith, and D.H. Persing. (1993) Dependence of polymerase chain reaction product inactivation protocols on amplicon length and sequence composition. *J. Clin. Microbiol.* 31:2361-2365.

Podzorski, R.P., and D.H. Persing. (1993) PCR: The next decade. Clin. Microbiol. Newslett. 15:137-144.

Quick, R.E., B.L. Herwaldt, J.W. Thomford, M.E. Garnett, M.L. Eberhard, M. Wilson, D.H. Spach, J.W. Dickerson, S.R. Telford III, K.R. Steingart, R. Pollock, D.H. Persing, J.M. Kobayashi, D.D. Juranek, and P.A. Conrad. (1993) Babesiosis in Washington State: a new species of Babesia. Ann. Intern. Med. 119:284-290.

Barthold, S.W., M.S. de Souza, J.L. Janotka, A.L. Smith, and D.H. Persing. (1993) Chronic Lyme borreliosis in the laboratory mouse. Am. J. Pathol. 143:959-972.

Laskus, T., J. Rakela, J.W. Mosley, M. Nowicki, and D.H. Persing. (1993) Prevalence and nucleotide sequence analysis of pre-core mutations among patients with fulminant hepatitis in the USA. Gastroenterology 105:1173-1178.

Nocton, J.J., F. Dressler, B.J. Rutledge, P.N. Rys, D.H. Persing, and A.C. Steere. (1994) Detection of *Borrelia burgdorferi* DNA by polymerase chain reaction in synovial fluid in Lyme arthritis. N. Engl. J. Med. 330:229-234.

Persing, D.H., B.J. Rutledge, P.N. Rys, D.S. Podzorski, K.D. Reed, P.D. Mitchell, B. Lin, and S.E. Malawista. (1994) Target imbalance: disparity of *Borrelia burgdorferi* genetic material in synovial fluid from Lyme arthritis patients. J. Infect. Dis. 169:664-668.

Yang, L., J.H. Weis, E. Eichwald, C.P. Kolbert, D.H. Persing, and J.J. Weis. (1994) Heritable susceptibility to *Borrelia burgdorferi* induced arthritis is dominant and is associated with persistence of high numbers of spirochetes in tissues. Infect. Immun. 62:492-500.

Thomford, J.W., P.A. Conrad, S.R. Telford, D. Mathiesen, B.H. Bowman, A. Spielman, M.J. Eberhard, B.L. Herwaldt, R.E. Quick, and D.H. Persing. (1994) Cultivation and phylogenetic characterization of a newly recognized human pathogenic protozoan. J. Infect. Dis. 169:1050-1056.

Laskus, T., J. Rakela, and D.H. Persing. (1994) The stem-loop structure of the cis-encapsidation signal is highly conserved in naturally occurring hepatitis B virus variants. Virology 200:809-812.

Laskus, T., J. Rakela, M.J. Tong, M. Nowicki, J.W. Mosley, and D.H. Persing. (1994) Naturally occurring hepatitis B virus mutants with deletions in the core promoter region. J. Hepatol. 20:837-841.

Persing, D.H., D. Mathiesen, D. Podzorski, and S.W. Barthold. (1994) Genetic stability of *Borrelia burgdorferi* recovered from chronically infected laboratory mice. Infect. Immun. 62:3521-3527.

Dicaudo, D.J., W.P.D. Su, W.F. Marshall, S.E. Malawista, S.W. Barthold, and D.H. Persing. (1994) Acrodermatitis chronica atrophicans in the United States: clinical and histopathologic features of six cases. Cutis 54:81-84.

Geha, D.J., J.R. Uhl, C.A. Gustaferrero, and D.H. Persing. (1994) Multiplex PCR for identification of methicillin-resistant staphylococci in the clinical laboratory. J. Clin. Microbiol. 32:1768-1772.

Marshall, W.F. III, S.R. Telford III, P.N. Rys, B.J. Rutledge, D. Mathiesen, A. Spielman, and D.H. Persing. (1994) Detection of *Borrelia burgdorferi* DNA in museum specimens of *Peromyscus leucopus*. J. Infect. Dis. 170:1027-1032.

Malawista, S.E., S.W. Barthold, and D.H. Persing. (1994) Fate of *Borrelia burgdorferi* DNA in tissues of infected mice after antibiotic treatment. *J. Infect. Dis.* 170:1312-1316.

Laskus, T., J. Rakela, J.L. Steers, R.H. Wiesner, and D.H. Persing. (1994) Precore and contiguous regions of hepatitis B virus in liver transplantation for end-stage hepatitis B. *Gastroenterology* 107:1774-1780.

Hunt, J.M., G.D. Roberts, L. Stockman, T.A. Felmlee, and D.H. Persing. (1994) Detection of a genetic locus encoding resistance to rifampin in mycobacterial cultures and in clinical specimens. *Diagn. Microbiol. Infect. Dis.* 18:219-227.

Laskus, T., J. Rakela, M.J. Tong, and D. H. Persing. (1994) Nucleotide sequence analysis of the precore region in patients with spontaneous reactivation of chronic hepatitis B. *Dig. Dis. Sci.* 39:2000-2006.

Laskus, T., J. Rakela, R.H. Wiesner, J.L. Steers, and D.H. Persing. (1994) Lack of evidence for hepatitis B virus (HBV) infection in fulminant non-A, non-B hepatitis. *Dig. Dis. Sci.* 39:1677-1682.

Tenover, F.C., M.B. Huang, J.K. Rasheed, and D.H. Persing. (1994) Development of PCR assays to detect ampicillin resistance genes in cerebrospinal fluid samples containing *Haemophilus influenzae*. *J. Clin. Microbiol.* 32:2729-2937.

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